

BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA
DOCKET NO. 2019-239-E

In the Matter of:)	
)	
Dominion Energy South Carolina, Inc.’s)	DOMINION ENERGY SOUTH
Request for Approval of an Expanded)	CAROLINA, INC.’S
Portfolio of Demand Side Management)	LATE FILED HEARING EXHIBIT IN
Programs and a Modified Demand Side)	RESPONSE TO LATE FILED HEARING
Management Rate Rider)	EXHIBIT 5
)	

As authorized at the hearing in this matter, Dominion Energy South Carolina, Inc. (“DESC” or the “Company”) submits this hearing exhibit in response to Late Filed Hearing Exhibit 5 that was prepared in response to questioning from Commissioner Ervin (the “Late Filed Exhibit”). That exhibit was submitted by the South Carolina State Conference of the NAACP, the South Carolina Coastal Conservation League, and the Southern Alliance for Clean Energy (the “Joint Interveners”) on November 19, 2019.

As explained in the Company’s Motion to Strike Late Filed Hearing Exhibit 5, which is filed contemporaneously with this Response, the Late Filed Exhibit improperly includes matters that are outside the scope of Commissioner Ervin’s request. The request was for submission of a specific set of energy efficiency programs that could address winter peak and a set of specific new incentives to motivate contractor referrals and investment in those programs. The Late Filed Exhibit included points far beyond this specific request. However, DESC will respond to the key points, whether appropriately raised or not, in the Late Filed Exhibit as presented. In submitting this exhibit, DESC does not waive any claims it has as to the admissibility, evidentiary value or other matters associated with the Late Filed Exhibit.

1. Response to the Introduction and Recommendations

In this initial section of the Late Filed Exhibit, the Joint Interveners propose that the Commission require DESC to launch a new six-month process to revise its DSM programs “to develop programs that are specifically targeted to reduce winter peak.” But as the Joint Interveners recognize, practically all programs and measures, except those specifically directed to air conditioning load, are winter peak reducing measures. As shown in Table A below, DESC’s proposed DSM portfolio is forecasted to reduce winter peak by 237 MW over ten years, and all proposed DSM programs contribute in some way to this winter peak reduction:

Table A

Program/Measure Name	Winter Peak MW Saved	
	PY10-PY14	PY10-PY19
Residential	36.521	65.103
Heating & Cooling	8.711	16.469
Home Energy Check-up	6.534	9.772
Online Store	4.879	6.093
Neighborhood Energy Efficiency Program	4.602	6.640
Multifamily	3.816	7.232
Home Energy Reports	3.414	8.662
Appliance Recycling	2.641	5.461
Heating & Cooling - Water Heating	1.924	4.774
Commercial	73.436	168.745
EnergyWise For Your Business (EWFYB)	51.826	122.725
Small Business	18.627	43.037
Municipal LED Lighting ¹	2.982	2.982
Industrial	1.651	3.581
EWFYB - Strategic Energy Management	0.779	1.833
EWFYB - Industrial efficiency	0.872	1.748
Total	111.607	237.429

¹ The reduction in peak demand due to municipal lighting depends on the precise hour of peak. It may not occur under all conditions.

To require the Company to conduct a six-month process to look “specifically” at winter peak measures would be duplicative of the Company’s potential study filed as a part of this proceeding and would, in effect, require a second, full scale DSM planning process. The Joint Interveners do not provide any justification for doing so. As demonstrated later in this exhibit, the Joint Interveners point to no specific winter peak reducing measures that DESC ignored that would be would be practical or cost effective if implemented. The Joint Interveners do not challenge any of the methodologies or analyses of programs and measures which showed some measures to be cost effective and others not. Accordingly, it is not clear how the proposed new six-month planning process would reach different conclusions or affirm different program plans from those reached in the year-long process that is currently before the Commission. The Joint Interveners have not shown any reason why a repeated DSM planning process is needed nor have they justified the associated expenses’ unnecessary burden on ratepayers.

DESC launched the process for creation of the current set of DSM programs over a year ago. It convened the Energy Efficiency Advisory Group (the “Advisory Group”) four times to review the scope and methodology of the planned potential study, the measures that were considered, and the draft results before the plan was finalized. This proceeding was filed and parties were given the opportunity to conduct discovery, present witnesses and make any proposals they thought appropriate. The Joint Interveners, certain of whom participated in the Advisory Group process, now seek to start that process over again, but they do not factually justify this request.

As the Commission stated in Order No. 2013-826, the purpose of the Advisory Group is to “consider and make recommendations to [DESC] with respect to efficiency potential studies, new program ideas, modifications to existing programs, outreach and education programs and funding,

and EM&V plans.” Order No. 2013-826, at pp. 21-22. DESC recognizes that crafting effective DSM programs is not a static process, and the Company will continue to welcome and review input from its stakeholders as it monitors the effectiveness of its programs and identifies areas for ongoing improvement and expansion. DESC respectfully submits that the established process for monitoring and evaluating DSM programs is the appropriate process to follow at the conclusion of this proceeding.

Regarding the Joint Interveners newly proposed shared savings incentive, there are good reasons to disfavor such a sliding scale approach. Incentives received under a fixed percentage formula, as suggested by the Company, are self-adjusting. They increase where programs are successful and decline where they are not. Adding a sliding scale creates a double penalty for underperformance and a double bonus for over-performance. This is not helpful. A sliding scale also injects artificially-set target levels into the incentive calculation, which can distort decision-making in an attempt to meet key thresholds. In all cases, a utility must balance its interests in incentives with the interest of its ratepayers in ensuring that DSM spending is as cost-effective as possible and overall rate impacts on customers are reasonable. Supercharging the incentive calculation by use of sliding scale percentages can have unintended negative consequences. And, as a practical matter, the Company is already fully committed to meeting its obligations as set forth by this Commission. No additional incentive or penalty mechanisms are necessary.

The evidence presented below will establish that the Late Filed Exhibit identifies no meaningful additions or modification to be made to DESC’s proposed portfolio of DSM programs and measures. It provides no meaningful analysis of any of these programs or measures. It points to no meaningful omissions in the process. The Commission should not take action based on it.

2. Programs to Reduce Winter Peak

DESC agrees with the statement in the Late Filed Exhibit that “nearly all efficiency measures will have some effect on winter peak.” Late Filed Exhibit at 3. As shown in Dominion Energy South Carolina 2020-2029 Achievable DSM Potential and PY10-PY14 Program Plan (the “Potential Study”), DESC is proposing to achieve winter peak reductions through a number of measures. They have been evaluated and determined to be practical to implement in its service territory, cost effective, and aligned with the needs and receptivity of its customers. In aggregate, the impact of the proposed suite of DSM Programs on winter peak is estimated to be 111 MW over five years and 237 MW over ten years. These are substantial reductions.

2.1 Efficiency Measures to Prioritize

The “**Efficiency Measures to Prioritize**” section of the Late Filed Exhibit lists five categories of efficiency measures to reduce winter peak. Each of the categories of measures but one is already included in DESC’s proposed suite of programs. The facts will show that the last item, Combined Heat and Power, is not currently appropriate to implement as a DSM program.

2.1.1 Building Envelope

Air-Seal and Insulate—General. DESC agrees with the statement made in the Late Filed Exhibit that “[f]or residential or commercial buildings with electric heat, comprehensive weatherization (air sealing and insulation) provide[s] savings that have beneficial impacts on winter peak demand.” The Late Filed Exhibit, however, neither identifies any specific measures or programs for air sealing and insulation, nor does it show any to be cost effective. This is a glaring omission. Further, the inference that DESC has somehow failed to consider and include such measures is unwarranted. DESC proposed a suite of programs that includes multiple programs that address air sealing and insulation, each of which was determined to be practical to

implement in DESC's service territory, would meet the needs of its customer base and would be likely to produce meaningful winter peak reductions. Each has been determined to cost effective in the Potential Study.

Specifically, the newly-proposed Tier 2 offering under the Home Energy Check-Up program will incentivize air sealing and insulation measures for residential customers at up to 75% of cost. *See* Potential Study, Section 11.3. This program is open to all residential customers.

As an offering addressing existing construction, the Home Energy Check-Up program is a priority in the portfolio of DESC's DSM programs. It has the highest budget of all residential programs in DESC's proposed portfolio and the second highest contribution to the forecasted reduction of winter peak. Additionally, the program is open to all residential electric customers regardless of home type (mobile home, single family, multifamily) and whether customers rent or own their home. Those figures are found in Table A above and in the Potential Study at page 53.

For commercial and industrial customers, the flagship DSM program is the EnergyWise for Your Business ("EWFYB") program. Under the custom path, customers and their contractors determine the specific measures, including adding insulation and/or air sealing, that are required to improve the energy efficiency of a particular business or building. The program then incentivizes the cost of implementing those customized measures at up to 50% of their cost. In total, the program is estimated to reduce winter peak by 122 MW over the coming ten years.

Insulation and air sealing incentives are marketed as an integral part of DESC's overall DSM portfolio. As part of its outreach and training for trade allies, DESC publicizes these programs to its trade allies, provides free onsite contractor training and encourages them to promote incentives to their customers. These programs are also promoted to residential customers

directly as part of the new or modified Heating & Cooling program and Home Energy Reports marketing plans.

Air-Seal and Insulate—Mobile Homes. DESC agrees with the statement made in the Late Filed Exhibit that “[m]obile and manufactured homes provide a particularly compelling target as they are often heated with electric resistance heat and on average they have higher use, on a per square foot basis, than site-built homes.” Late Filed Exhibit at 3. Based on comments from the Advisory Group, the Company added a comprehensive set of mobile home energy efficiency measures to the Neighborhood Energy Efficiency program (“NEEP”) in recent years. Those measures include direct install of air sealing, duct sealing, belly board insulation/repair, and attic plug and fill insulation and reflective roof coating, all incentivized at 100% of the cost. DESC chose to tie these measures to NEEP because of the importance of community involvement in gaining the trust of mobile home customers to allow access to their homes, and the importance of the neighborhood sweep approach to overcome the inefficiencies inherent in attempting to deliver the program to isolated mobile homes. DESC chose to include a requirement that the mobile home be evaluated for inclusion in the mobile home component after participation in the core NEEP offering because, in its experience, some mobile homes are in such bad condition that major structural repairs would be required before insulation and sealing measures could have a meaningful impact on energy efficiency. Mobile home customers also qualify for other programs available to residential customers, including Home Energy Check-Up and the EnergyWise Savings (Online) Store.

Air-Seal and Insulate—Conclusion. In sum, the proposed suite of programs does in fact target and prioritize air sealing and insulation both for residential, commercial and industrial

customers generally, and for mobile homes specifically. This fact is not fully appreciated or reflected in the Late Filed Exhibit.

2.1.2 Heating, Ventilation, and Air Conditioning (Plant, Distribution, Control)

Replace Electric Resistance Heat with Air Source Heat Pump. DESC agrees with the statement made in Late Filed Exhibit that “[r]eplacing electric resistance space heat with an air source heat pump can provide dramatic savings and will reduce winter peak.” Late Filed Exhibit at 3. Under the Heating & Cooling and Water Heating Program, DESC proposes to incentivize the replacement of electric resistance heating with an air-source heat pump with incentives that range from \$550 to \$875. These measures are described in more detail in the Potential Study at Section 11.2. The Potential Study analyzed the level of incentive required to motivate electric resistance heating replacement while maintaining the cost-effectiveness of the measure. The incentive amounts were set accordingly and included input received from both HVAC contractors and distributors during the trade ally workshops. As with other incentive levels, these incentive levels will be evaluated and adjusted as needed going forward based on program results and the results of the annual Evaluation, Measurement and Validation (“EM&V”) studies.

The Heating & Cooling and Water Heating Program is prioritized as an existing construction program. It is the second largest residential DSM program by budget and has the largest impact on peak demand of all residential DSM programs.

In addition, the new Multifamily program includes the replacement of electric resistance heat with an air-source heat pump under the incentivized common area measures for property owners. *See* Potential Study, Appendix D. Replacement of electric resistance heating by commercial and industrial customers is incentivized as a custom measure under the EnergyWise for Your Business program.

Install Smart Thermostat. In the Late-Filed Exhibit, the Joint Intervenors observe that “[u]tilities in many states are providing incentives for smart thermostats to reduce energy consumption.” Late Filed Exhibit at 4. The Late Filed Exhibit appears not to fully appreciate the fact that DESC proposes to become one of them. DESC’s proposed suite of DSM programs includes a \$75 incentive for smart thermostats purchased through the EnergyWise Savings (Online) Store. *See* Potential Study, Section 11.6. Additionally, commercial and industrial customers can receive smart thermostat incentives as a custom measure in the EnergyWise for Your Business program.

Seal and Insulate Ductwork. DESC agrees with the statement made in Late Filed Exhibit that “[w]hen electric systems include ductwork . . . making sure that ducts are properly sealed and that they are insulated wherever they go outside of the conditioned space can reduce winter peak.” Late Filed Exhibit at 4. In fact, DESC offers specific ductwork measures under two programs, the Neighborhood Energy Efficiency program (“NEEP”) and the Heating & Cooling and Water Heating program. Potential Study, Sections 11.5, 11.2. The Heating & Cooling and Water Heating program proposes to provide an incentive of \$300 for duct sealing and \$300 for duct insulation. Targeted mobile home customers under NEEP receive duct sealing at 100% subsidy of the cost. Under Home Energy Check-up Tier 2 duct sealing and insulation can also qualify as a miscellaneous home shell measure and be incentivized at up to 75% of the cost. Potential Study, Section 11.3. For commercial and industrial customers, duct sealing qualifies for incentives under the custom path for the EnergyWise for Your Business program.² Potential Study, Section 11.8.

² Industrial customer can also apply for this rebate; however, in DESC’s experience, few industrial customers require this service or have the applicable building type where this service would be necessary.

The Late Filed Exhibit does not mention these offerings or suggest any need to expand or modify them. It does not provide any facts showing that to do so would be practical and cost effective.

Combined Heat and Power (“CHP”). As stated in the Late Filed Exhibit, “[c]ombined heat and power (“CHP”) involves the simultaneous production of electricity and useful thermal energy.” It involves “recapturing some of the exhaust heat from gas fired generators” so that “commercial buildings can utilize some of the otherwise wasted energy for domestic hot water or space heating purposes.” Late Filed Exhibit at 4.

CHP projects are generally most attractive to customers that have a large requirement for heat (e.g., food processing, pharmaceutical, refining, pulp and paper, hospitals, and universities, etc.). In DESC’s case, many of the customers that could potentially benefit from CHP have opted out of the Company’s energy efficiency programs. The CHP equipment is typically sized to meet the heat load, and the amount of electricity generated follows the heat required. A CHP project can often cost millions of dollars, and incentives to support such projects can encumber a significant portion of a utility’s energy efficiency program incentive budget.

In light of these considerations, DESC did not perform a cost effectiveness analysis of CHP for the purposes of this filing, preferring to focus its offerings on a broader group of measures and participating customers, especially low-income customers.

2.1.3 Summary of Efficiency Measures

With the exception of CHP, which has not been shown to be cost effective or desirable, DESC already implements or proposes to implement programs and measures responsive to each of the Joint Interveners’ suggestions.

2.2 Demand Response or Management Measures that do not Require AMI

The material presented in the Late Filed Exhibit related to demand response (“DR”) measures are not responsive to the late filed exhibit request. Nonetheless, a short response to them is provided here.

2.2.1 HVAC

Provide smart Wi-Fi-controlled thermostat with contracted ability for DESC to adjust settings in advance of or during winter peak events. As discussed in detail in the prefiled direct and rebuttal testimony of John Raftery, as well as at the hearing, the Potential Study specifically evaluated the potential for direct load control through Wi-Fi enabled thermostats. The Potential Study determined that it was not cost effective to implement such a program as part of its 5-year DSM Program Plan. Tr. at 18.12-18.13. The Late Filed Exhibit provides no data or analyses that call this conclusion into question.

Setback temperature in commercial HVAC systems with variable speed drive motors. DESC proposes to offer this measure in the EnergyWise For Your Business program under the Strategic Energy Management component. Potential Study, Section 11.8. It is already a part of the proposed DSM portfolio, as are other measures to allow large and medium general service customers to reduce their on-peak power usage. These customers are very often billed under rates that include demand charges or time of use components, so these customers directly benefit from measures that allow them to reduce their peak demands. Several measures incentivizing peak usage reduction are embedded in the current commercial and industrial custom path portfolio.

2.2.2 Lighting

Commercial lighting controls. DESC already offers lighting control measures under the EnergyWise for Your Business Program and proposes additional tools, coaching and technical resources under the Strategic Energy Management offering. *See* Potential Study, Section 11.8.

Additionally, under the Municipal LED Lighting program, remote monitoring and lighting control will be included. *See* Potential Study, Section 11.10. These measures allow commercial and industrial customers to reduce peak demands with direct rate benefits to customers as discussed above.

2.2.3 Industrial Process

Interruptible loads. DESC already offers interruptible rate credits for non-residential customers. In fact, the interruptible load program is the Company's dominant demand response program. *See* Potential Study at Sections 6, 7, 8. The scope and limitations of this program are discussed in the rebuttal testimony of Mr. Raftery. Tr. at 23.4-23.5.

2.2.4 Generators

Emergency generators. DESC already offers standby generation for non-residential customers. *See* Potential Study, Sections 7, 8. Again, the scope and limitations of this program are discussed in the direct and rebuttal testimony of Mr. Raftery. Tr. at 23.4-23.5.

2.2.5 Energy Storage

Battery energy storage systems. Battery storage is generally considered a part of renewable or alternative energy programs, and DESC has provided the Commission with ample evidence in Docket No. 2019-184-E that battery storage is not commercially viable on DESC's system at this time. Nonetheless, customers who wish to install battery storage can do so as a qualifying facility under DESC's Rate PR-Avoided Cost Methodology. However, there is no basis to conclude that battery storage would be cost effective as a DR program.

2.2.6 Summary of Demand Response/Management Measures

As indicated above, the Potential Study evaluated each of the DR programs listed above, with the exception of battery storage, which has been independently shown not to be cost effective. DESC already implements or proposes to implement those programs that are cost effective.

2.3 Program Strategies to Reduce Winter Peak

2.3.1 Outreach Strategies

This part of the Late Filed Exhibit concerns outreach or implementation strategies. DESC currently implements the following outreach strategies that properly target programs to customers with the ability to assist in reducing winter peak.

- The new version of Home Energy Reports will be targeted to residential customers with high energy usage based on public information regarding the size, age, location and building type of their homes. The program is intended to serve as a gateway to other DSM programs, including those that target HVAC efficiency and electric resistance heat conversion.
- NEEP identifies and targets the mobile home component of the program to those mobile home customers with the highest annual energy usage.
- Likewise, for the Small Business Direct Install program, DESC targets rural areas that mirror the NEEP eligible neighborhoods. DESC reaches out to all small business in a targeted area, and in areas where NEEP is provided, so more specific targeting of businesses in low-income neighborhoods, such as by energy usage, would not provide practical benefits.

2.3.2 Measure-Mix Strategies

- **Contractor Referral Strategy.** The Late Filed Exhibit proposes cross-referral incentives to be paid to distributors and contractors. The Company carefully considered

the full complement of barriers to participation in designing its programs, and concluded that such cross-referral incentives are not currently necessary—especially since they come at the cost of reducing incentive payments to customers. Instead, the Company endeavors to reduce the program’s administrative burden on contractors and distributors, and supports contractors in selling more comprehensive and higher efficiency projects. Absent a compelling reason to provide referral incentives to intermediaries, the Company prefers to have as much of the incentive as possible end up in the pockets of customers.

Additionally, the Potential Study determined that stand-alone duct replacement is not cost effective, so a referral strategy between HVAC contractors and duct replacement contractors is not necessary. Home shell measures are handled under Tier 2 of the Home Energy Check-up program, and duct sealing is under the Heating & Cooling and Water Heating program.

In conclusion, DESC does not believe this strategy is currently necessary and appropriate in its service area.

- **Encourage weatherization prior to installation of heating system.** Currently, DESC offers ductwork training to contractors so that they will promote the ductwork rebates along with the installation of new heating and cooling equipment. Therefore, DESC believes it currently implements this strategy.

2.3.3 Program Strategies to Reduce Winter Peak

- **Provide targeted customer incentives.** Providing dynamic—income qualified—incentives is not a common practice in DSM portfolios. Evaluating customers’ financial status on an individual basis would result in administrative burdens and costs, be

intrusive on customer privacy, and would likely lead to disputes, resentment and bad customer relations. The accepted practice is, wherever possible, to make DSM benefits available on an even-handed basis. Other approaches run the risk of unintended, negative consequences.

Similarly, on-bill financing is not a common practice in DSM portfolios. It is difficult and costly to administer and can lead to bad customer relations. The Company is monitoring other utilities' pilot programs for on-bill financing and will continue to monitor the success of those programs in light of costs and customer reaction.

- **Provide contractor incentives.** Regarding the suggestion that DESC should encourage multiple-measure projects by increasing incentives as more measures or savings are added, this suggestion is one that DESC intends to consider going forward. It was not previously made during the stakeholder and trade ally review process, and DESC would like the opportunity for stakeholders and trade allies to review this suggestion before any decision on it is made.
- **Customer-initiated load curtailment.** DESC already offers customer-initiated load curtailment. As Mr. Raftery explained, DESC currently offers one Conservation and two Time-of-Use ("TOU") rates to residential customers and offers industrial and commercial customers an Interruptible Rate Rider, a Standby Generator Program, TOU Rates, and, for certain existing industrial and commercial customers, a Real Time Pricing Tariff. Tr. at 18.10-18.12. Therefore, this strategy is already being implemented.
- **Direct load control.** Electric water heater direct load control was evaluated and determined not to be cost effective under the 5-year DSM Program Plan.

- **Third-party aggregation.** This type of program structure was not assessed through the Potential Study. As Mr. Raftery testified, DESC is in the process of rolling out AMI itself and not yet determined the structure of its demand response programs. It is not clear at this juncture what benefit third party aggregators could provide compared to the direct participation of customers in future demand response programs. It would not be practical to make a decision concerning the role of third party aggregators at this stage of the process.

3. Sliding-Scale Shared Savings Incentive Structure

DESC incorporates its prior testimony related to a sliding-scale shared savings incentive structure. For the reasons previously stated in prefiled direct and rebuttal testimony, and reiterated at the hearing in this matter, such a structure should be rejected. While the Joint Interveners have lowered the performance threshold to 0.5% to receive any incentive under their sliding scale, DESC maintains that this threshold still provides that the Company to recover no incentive if it does not accomplish 0.5% savings. Considering that the Company is not predicted to accomplish 0.5% savings until 2020 or later, the proposal still violates S.C. Code Ann. § 58-37-20. For this reason, a sliding scale structure must, on its face, be rejected.

4. Conclusion

For the reasons stated above, the Late Filed Exhibit does not provide meaningful data or suggestion related to DESC's proposed suite of DSM programs. DESC would respectfully suggest that the Commission should not take any action based on it.